A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics

Special Purpose Acquisition Companies in the Italian market

Elia Morini

Student number: 28729

Work project carried out under the supervision of:

Prof. Irem Demirci

13 January 2021

Table of Contents

Table of Figures

Abstract

This work project illustrates the characteristics of Special Purpose Acquisition Companies and focuses specifically on the Italian Market.

SPACs' performance is analysed using an even study framework and classifying the companies either in *Good SPACs* or *Bad SPACs* depending on market prices before the vote on the acquisitions. Raw and risk adjusted returns are computed and I find evidence for underperformance of this asset class, with the *Bad SPACs* sub-sample performing significantly worse than the *Good SPACs.*

The potential reasons behind the approval of *ex-ante* value destroying acquisitions are briefly mentioned.

Keywords: SPAC | IPO | Listing Methods | Special Purpose Acquisition Companies

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

1. Introduction

Companies go public and list on a stock exchange for several reasons, from raising capital to increasing liquidity for their existing shareholders to allowing initial investors to exit and cash in on their investment.

There are several methods of going public, the most common being the traditional IPO with an underwriter that supports the company in different phases of the process, from the initial filing, to the roadshow, to the book-building and allocation of shares.

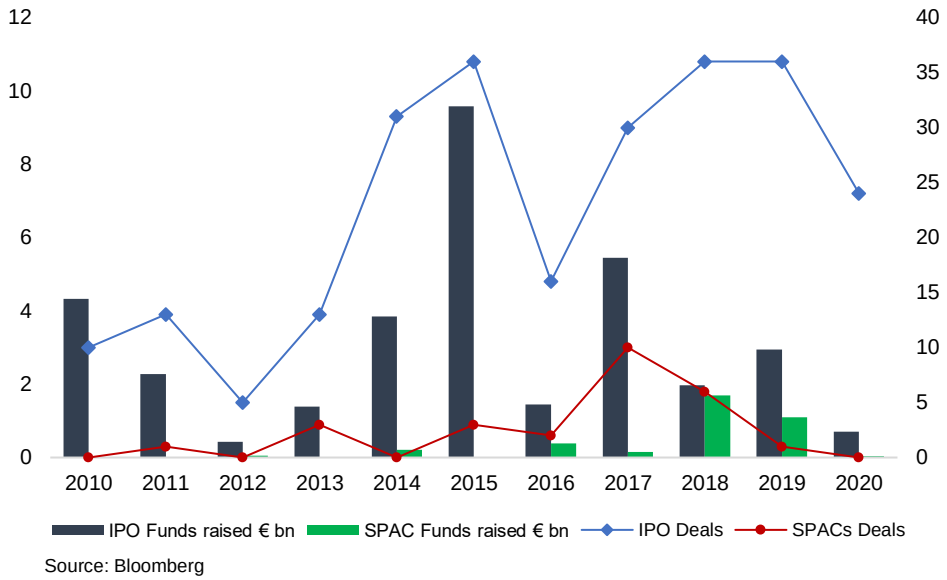
In the past decade, new methods substantially deviating from the traditional IPO have emerged. Dutch auctions, Special Purpose Acquisition Companies (SPACs), direct listings, and online bids entered the landscape.

In this work I will focus on SPACs and their performance in the Italian market. This market experienced a surge in listings of SPACs over the past years, with a total of 26 SPACs that raised €3.62bn in total. This figure represents 10.5% of the funds raised in IPOs on the Italian Stock Exchange, with a total of 250 deals that raised overall €34.4bn. Full statistics are available below in *Figure 1*.

This work project is structured as follows: section II introduces some important theoretical concepts instrumental to understanding the subsequent sections. I analyse SPACs' structure with a focus on the stakeholders involved and their incentives, and I make a comparison with Private Equity funds, with which they share features. I give an overview of the most prominent literature. In section III, I present the methodology and the data used in my work. In section IV, I describe the sample and present the share price behaviour around key dates of the SPAC lifecycle: announcement date and voting date. I subsequently analyse the returns of two different portfolios – which I call *Good* and *Bad SPACs* – up to two years after the acquisition. In the last part I discuss the reasons why some acquisitions were carried out even though the

market signalled ex-ante that they were value destroying. Section V presents a conclusive overview of the asset class as whole and its future.

Figure 1: IPOs and SPACs listed in Italy (Number of deals right hand axis, total funds raised left hand axis)

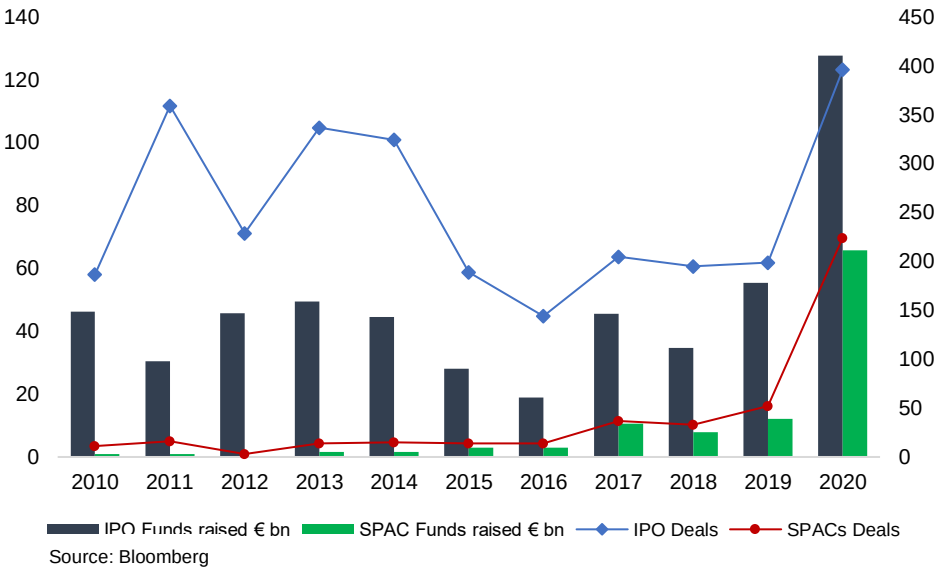


Source: Bloomberg

2. SPACs overview

SPACs are not a new product. The first SPACs originated in the United States in the 1980s and were often associated with obscure and dodgy investments as the asset class was very loosely regulated. The bad experience and SEC intervention killed the market for many years, until the SEC published new rules known as Rule 419 to better safeguard investors. SPACs were back in the spotlight as demonstrated by the surge in number of IPOs and funds raised. In Italy, the first SPAC saw the light in 2011 and many more followed. In *Figure 2* below, the total number of IPOs and SPACs listed in the US, together with the total funds raised by the two categories, are reported. Over the period 2010-2020 2764 companies were listed, with a total value of €526.9bn; of these 433 were SPACs with a total value of €107.3bn, but with their share trending upwards. In 2020 224 SPACs were listed and raised €65.8bn, representing more than half of total IPOs, both in terms of value and volume, in the year.

Figure 2: IPOs and SPACs listed in the US (Number of deals right hand axis, total funds raised left hand axis)



The existing literature on SPACs outside the USA is still in its infancy as longer track records are needed to announce their success or failure. The features of SPACs are also still subject to constant change, and they are still considered a niche.

In this chapter I outline the main features of this product, I analyse differences and similarities with Private Equity funds, and I give an overview of the existing literature.

2.1 SPACs' features

SPACs are also known as blank-cheque companies. They are listed on the stock exchange to raise money from investors and their objective is to carry out an acquisition within a certain amount of time, usually 24 months. They are sponsored and managed by promoters who take care of finding the target to merge with and negotiate the purchase price. Usually, promoters already have expertise in the target industry of the SPAC. Promoters are responsible for negotiating and proposing to shareholders the price of the target, so unlike other methods the process of price discovery is not market driven. They are granted special shares and earn-out compensation, reaching around 20% of the capital if any acquisition is carried out. This last

feature is very important as it gives the promoters an incentive to complete any acquisition, which generates conflicts of interest with other shareholders.

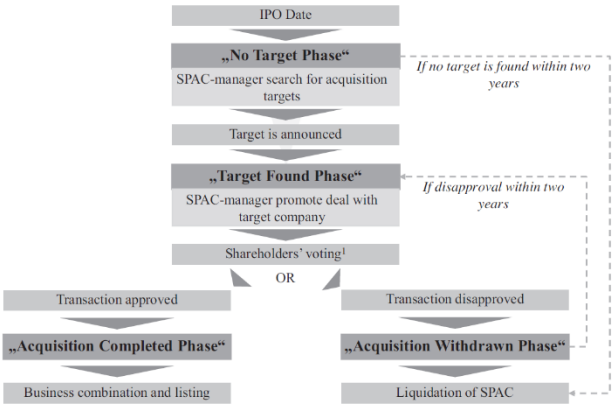
Individual investors participating in the IPO acquire a *unit*, for the price of 10 Euro, consisting of a share and a warrant that will eventually allow acquiring further shares after the acquisition is performed. Most of the money raised is deposited in an escrow account and will be used solely to acquire the target. The escrow funds are invested in short-term government bonds or certificates of deposits. An investment in SPACs is therefore sometimes seen as very low risk with upside potential in case a promising acquisition is found. Chemmanur and Fulghieri (1997) provide reasons why risky companies should choose units during the initial public offering, committing to further dilution by issuing more stocks on a future date as it is a way to signal to the market the confidence of promoters in the deal.

Individual investors have a say on the acquisition, whether by selling their shares on the market at a value close to the escrow or at the general meeting where they can redeem their shares should they disagree with the proposed acquisition.

After the shareholders have approved the business combination with a percentage of redemptions usually not above 20%, the target is incorporated into the SPAC via a reverse merger and starts trading on the stock exchange with a new ticker. If the time limit is reached or the necessary consensus is not established the SPAC is liquidated and funds are returned to the shareholders.

The chart in *Figure 3* summarises the typical lifecycle of a SPAC:

Figure 3: SPAC lifecycle (D. Cumming et al. / Journal of Banking & Finance 47)



2.2 Literature review

Kold and Tykvová (2016) analyse what type of firms tend to use SPACs to go public in the US market and find that mostly small and levered firm with low growth opportunities - which may not be suitable for a traditional IPO – and during turbulent market conditions use this method. In addition, they explain that existing shareholders might push for this option to cash-in on their stake or have an option for a future exit. They track long-term abnormal returns and find evidence associated with severe underperformance.

Lakicevic, Shachmurove and Vulanovic (2014), Cumming, Haß and Schweizer (2014) study the changes in the corporate design and the characteristics of SPACs and if these changes affect the success of the merger. They find that the most important factors are the founders' reputation, the industry and geographic focus of SPACs, and the timing of acquisitions.

Dimitrova (2017) analyses SPACs' performance and their variations, explaining them with the incentives in the institutional structure of SPACs that push sponsors to pursue bad acquisitions rather than no acquisitions. She finds that overall, they perform poorly, and returns are worse when acquisitions are announced close to the deadline, when underwriters have deferred fees as compensation and when the market value of targets is close to the approval threshold. She

discovers that having sponsors involved in the governance and management of the acquired entity improves long-term performance.

Ignatyeva, Rauch and Wahrenburg (2013) focus their study on the European Market, which differs from the US market as it is less developed and has looser regulations. They find that SPACs, while being listed and incorporated in Europe, do not necessarily focus on that geographic area and thus promoters use this option due to tax considerations and less strict listing requirements. They investigate the investors' structure and find that the founders decrease their ownership over time, while institutional investors increase it. Moreover, they find that most institutional investors with a stake in the SPAC before the acquisition exit the company at a later stage, selling to other institutional investors. This last finding indicates that there are different groups of investors interested in participating in different stages of SPACs, and this might subsequently affect the trading behaviour of such investors, as they have different strategies and goals. The authors investigated the targets' operating performance evolution and found a negative development of many profitability metrics after the merger, linked to an increase in size.

Blomkvist and Vulanovic (2020) analysed the US SPAC market from 2003 and found that the SPAC volumes and SPAC IPOs over total IPOs are negatively related to the VIX index as a measure of market wide uncertainty and to variance of risk premium. They explain that these findings are related to reluctance of investors to buy opaque securities and that SPACs' sponsors address this flaw by increasing their *skin in the game.*

2.3 SPACs vs Private Equity

SPACs can be considered a new asset class, but they are similar in many regards to Private Equity (PE) funds, as they scout for private companies to invest in. Some authors (Fink, 2012) refer to them as *Poor man's private equity fund.*

Remuneration for managers is similar: PE funds usually have a 20% carry – present in SPACs if an acquisition is completed – and a yearly management fee, the latter absent in SPACs. Promoters rely on interest income from the escrow or on dedicated capital they injected in the SPAC via private placement to fund the SPAC's management costs and operating expenses before the acquisition.

PE funds usually last 10 years and investors are subject to several capital calls. SPACs have a limited time to complete an acquisition – usually 24 months – and capital is granted upfront, at the time of the SPAC's IPO.

PE's limited partners have limited exit opportunities before the end of the fund and might be subject to reputational constrains if they wish to divest their stake. SPACs are listed on the market – albeit their stocks are not always very liquid – and the investors face very little obstacles should they want to sell their stake.

Reputation is of paramount importance for PE, as the whole model is built on repeat business and long-term credibility (economies of scale and scope are present too), while SPACs are one-shot deals – although there is some recurrence in sponsors - and subsequently many structural characteristics, such as the possibility to vet the acquisition, are built in to fill this reputational gap.

All in all, PE and SPACs show similarities but many of these characteristics come from the context of private contract built on relationship, where information asymmetries and agency costs are present but counterbalancing mechanism are put in place. SPACs, being publicly traded and subject to higher market scrutiny, loose this beneficial effect coming from the private nature of the deal and the reputational checks in place. They grant investor other powers, such as the possibility to vote on proposed acquisitions and low-cost exit rights, opening the door for investors' and promoters' opportunism, as Rodrigues and Stegemollers write. These authors analyse the evolution of the SPAC institutional framework and the balance between exit voice

and reputation; they point out how *"the move toward complete elimination of the vote contributes to the literature on voice and exit, suggesting that given a cheap enough exit, investors no longer demand any vote as a tool for constraining agency costs".*

3. Methodology and data

3.1 Hypothesis development

Jenkinson and Sousa analysed the SPAC market in the US from 2003 to 2010 as this asset class raised more than USD 20bn during those years.

SPACs, according to the authors, are a very low risk option to invest in future acquisitions. They find that more than 50% of the deals destroy value and this fact is signalled by the market at the announcement of the potential target and reflected in stock prices. Notwithstanding this finding, deals get approved and SPACs are increasing in popularity and the amount of funds raised.

They point out that the SPAC structure creates very strong incentives for the founders to carry out any deal, as their payoff is largely linked to completing any acquisition. Nevertheless, investors still flood this asset class with money, as it provides very low risk, liquid investments and the optionality linked to participating in any future acquisition.

They proceed by describing the different phases of a SPAC focusing on the evolution of market prices.

They identify two stages:

- From the SPAC IPO to the announcement of a potential target: most of the capital raised from investors is kept segregated in an escrow account and invested in certificates of deposit or government bonds. Market prices reflect the value of investments in the escrow and show very little volatility.

- From the moment when a potential target is announced to the shareholder vote: market values gradually move – capturing new information released - to indicate whether the deal proposed is value-creating (i.e. share price above escrow liquidation value) or value-destroying (i.e. share price below escrow value) according to shareholders' assessment of the deal.

According to the authors, investors should trust market prices and vote following the criteria outlined above. This did not happen, and value-destroying acquisitions were approved. In the paper they build a trading strategy following this simple rule, dividing the *Bad SPACs* from the *Good SPACs,* based on the prices observed pre-vote. Their paper is built on the assumption that markets are efficient, and prices incorporate all available information.

Furthermore, they analyse the reason behind investors' voting in favour of value-destroying acquisitions, studying trading volumes around the decision date, finding that *Bad SPACs* experience a sizeable increase in trades on the days preceding the acquisition, as an indication that founders – or other parties acting on their behalf – purchase stocks on the market in an attempt to vote in favour of the deal at the upcoming general assembly.

I base my work project on their idea and apply their methodology to the Italian market, which has experienced a surge in listings for this instrument in past years. Studies with this geographic focus are missing in today's literature.

My work mirrors part of their paper and collects information on all SPACs listed on the Italian stock exchange. Likewise, I classify the ones who completed an acquisition in *Good* or *Bad* SPACs, depending on their share price one day before the shareholders' approval.

I analyse the performance of the two sub-portfolios after 1 week, 2 weeks, 1 month, 3 months, 6 months, 1 year and 2 years, both using raw returns and risk-adjusted metrics. In addition, I

show and explain how prices move around different key dates and discuss why *Bad* acquisitions were carried out, by interpreting trading volumes.

3.2 Data collection

SPACs information and market prices were collected via Bloomberg Terminal and using financial press and management information.

SPACs included in my study were identified on Bloomberg Terminal using the IPO function filtering for: i) SPAC ii) Geographical breakdown: Western Europe, Italy iii) Offer stage: trading. The sample period considered ranges from 1 January 2010 to 30 October 2020.

Often when SPACs merge with the target company they start trading under a new ticker. I correct for this issue adjusting the historical series for the SPACs affected.

All SPACs except one – Archimede Spa – acquired a private company; for the latter I adjust market prices considering the shares' exchange ratio agreed in the deal.

The key dates of the announcement day of the target and the voting date of the proposed business combination were hand collected using either SPAC's or target's press release or other financial press if original sources were not available.

3.3 Methodology

Each SPAC that completed a business combination is classified either as *Good* or *Bad* SPAC, depending on the observed stock's price one trading day before the voting day. I assume that the liquidation value of each SPAC equals the listing price, as most of the proceeds from the IPO are kept in an escrow account and will be fully available to shareholders in case of liquidation. If the stocks' price one day before the voting day is higher that the liquidation value, the SPAC is classified as *Good SPAC*, otherwise as *Bad SPAC.* Using the actual day of vote as reference for the classification does not change the result, except for one entity – FILA Spa. I use the classification obtained using the day before the voting date to account for potential issues related to the timing of the vote.

I calculate raw returns unadjusted for market movements starting from the decision date for several periods. I use data from the first day when prices are available with the following formula:

$$RawReturn_t = \frac{StockPrice_t - StockPrice_{t-1}}{StockPrice_{t-1}} \qquad (1)$$

Risk-adjusted returns are calculated using a standard CAPM model as follows:

$$E(R) = R_f + \beta_i(ER_m - R_f) \quad (2)$$

The time frame from the voting date to October 2020 is considered. Using the periods before the voting date would not be meaningful as the stock price tracks the liquidation value of the escrow account – invested in low-risk instruments – and not the performance of the future target. Weekly returns are used and Italian 1-year government bonds are chosen as the risk-free asset. FTSE Italia Small Cap is selected as a benchmark given that the index components best match the characteristics of the SPACs sample in this study. A broader index – S&P 500 – is used as well for comparison.

I apply an event studies framework to the sample, using the industry Beta from Damodaran as input. I evaluate the returns assuming a Beta equal to 1 as well - as often used in event studies to adjust for market returns. Another reason to calculate excess returns using a Beta equal to 1 is that Lewellen (2009) found that some portfolios of SPACs' capital structure resemble the characteristics of LBO funds and have a Beta close to one. They are more leveraged than peers, but they invest in industries with lower exposure to systematic sectors.

Estimating SPACs Beta with CAPM regressions is not a feasible option as the estimation period is very short and stocks are not very liquid and thus the results obtained are not meaningful or statistically significant.

The formula used in the event study to calculate cumulative abnormal returns is the following

$$CAR = RawReturn_t - R_m = \frac{StockPrice_t - StockPrice_{t-1}}{StockPrice_{t-1}} - \left[R_f + \beta_i(R_m - R_f)\right] \qquad (3)$$

I summarize the previous result, calculating the statistical significance of the return of the three methods being different than zero and the difference between the two sub-samples as well.

4. Sample data and results

4.1 Sample description

The first Italian SPAC was born on June 2011. Since then a total of 25 SPACs were listed on the Italian Stock Exchange. Of this sample, 7 were liquidated because they were not able to find a suitable target within the established timeframe or the proposed acquisition was voted down by investors. The remaining 18 successfully completed a business combination.

In terms of industry focus, some SPACs have in their bylaws a specific sector of interest, which is often reflected in the expertise of the promoters, while others are generalist. Due to the small universe of Italian SPACs, it is difficult to draw conclusions on the favourite industry of interest of the promoters, as target companies have been operating in very different sectors, including machinery, insurance, banking, green energy, chemicals, software, and healthcare.

Table 1 below reports descriptive statistics on all SPACs which have carried out a business combination. Information on the two sub-samples – *Good* and *Bad SPACs* – is available as well.

On average *Good SPACs* are smaller than *Bad SPACs* (€99m vs €201m) and take longer to find a suitable target (472 days vs 318 days from the IPO to the announcement date). The share price on the day before decision date is – by construction – above 100% of the listing price for *Good SPACs*, while the opposite is valid for *Bad SPACs* (113,7% vs 94,2%). The share price at the announcement date is higher on average for *Good SPACs*, as a potential indicator that the market was already positively assessing the deals at that time (101.2% vs 99.3%).

Comparing these statistics to all SPACs that completed an acquisition in the US sample - in Jenkinson and Sousa study - I find that on average Italian SPACs raised more funds (€145m vs

€85m), have higher maximum and minimum size (€600m vs €241m as maximum and €30m vs €11m as minimum). In terms of days between IPO and announcement date results are very similar, both for averages and maximum/minimum figures. In terms of share price before decision date divided by listing price, averages are very similar (105% vs 107.3%), but within the US sample the maximum reaches 224.3% of the trust value (similar concepts to the listing price in my study), while in the Italian sample this value reaches just 133.2%.

Table 1: Sample descriptive statistics

All SPACs with business combination (18)	**Average**	**Maximum**	**Minimum**	**Median**
SPAC size (€m raised)	145	600	30	99
Nº of days between IPO and announcement date	400	619	91	408
Nº of days between announcement date and decision date	136	326	27	137
Share price at announcement date / listing price	101,2%	136,1%	94,5%	98,6%
Share price at day before decision date / listing price	105,0%	133,2%	72,9%	101,7%
Good SPACs (10)	**Average**	**Maximum**	**Minimum**	**Median**
SPAC size (€m raised)	99	250	30	90
Nº of days between IPO and announcement date	472	619	298	483
Nº of days between announcement date and decision date	126	172	33	137
Share price at announcement date / listing price	102,8%	136,1%	95,6%	98,6%
Share price at day before decision date / listing price	113,7%	133,2%	101,4%	109,4%
Bad SPACs (8)	**Average**	**Maximum**	**Minimum**	**Median**
SPAC size (€m raised)	201	600	35	114
Nº of days between IPO and announcement date	318	564	91	286
Nº of days between announcement date and decision date	148	326	27	145
Share price at announcement date / listing price	99,3%	105,0%	94,5%	99,2%
Share price at day before decision date / listing price	94,2%	99,6%	72,9%	96,4%

4.2 Price behaviour at key dates

In *Figure 4* below I show the price behaviour, rebased to 100 at 3 days prior to the announcement date, of the two sub-samples, around two key events in the lifecycle of SPACs: the announcement date and the voting date. I report the data of 60 calendar days after the announcement of the business combination and 60 calendar days before and after the date of the general assembly when the acquisition will be approved or rejected by shareholders.

From the chart in *Figure 4* it is evident that the price of the two sub-samples starts to diverge when the announcement of a possible target is published as the market starts to assess and reflect into prices the quality of the deal found. *Good SPACs* on average show an increase in prices, while *Bad SPACs* seem just slightly negatively affected, as the investors still have the possibility to vote against the acquisition and receive their investment back.

Looking at the chart in *Figure 5* showing the price evolution before and after the voting date we can still see the difference in behaviour of the two sub-samples: *Good SPACs* show more volatility before the voting date and stabilise after that, while *Bad SPACs* are more stable before the voting date and the price deteriorates further after the voting date.

Before the announcement date the average price stays flat, for Bad and *Good SPACs*, mirroring the liquidation value of the vehicles, equal to the money held in the escrow account.

Figure 4: Average price 60 days after announcement date. Rebased at 3 days before the announcement date and divided into the two sub-samples

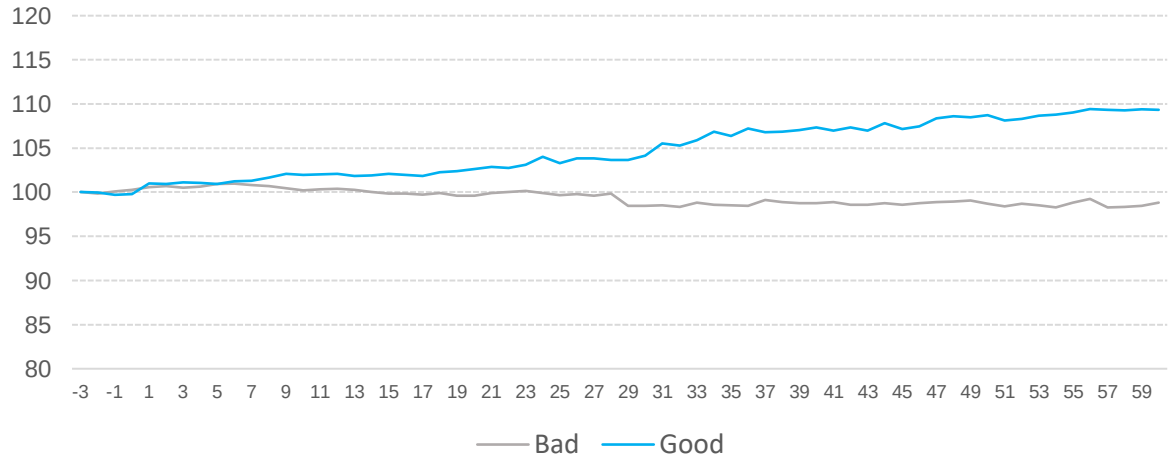
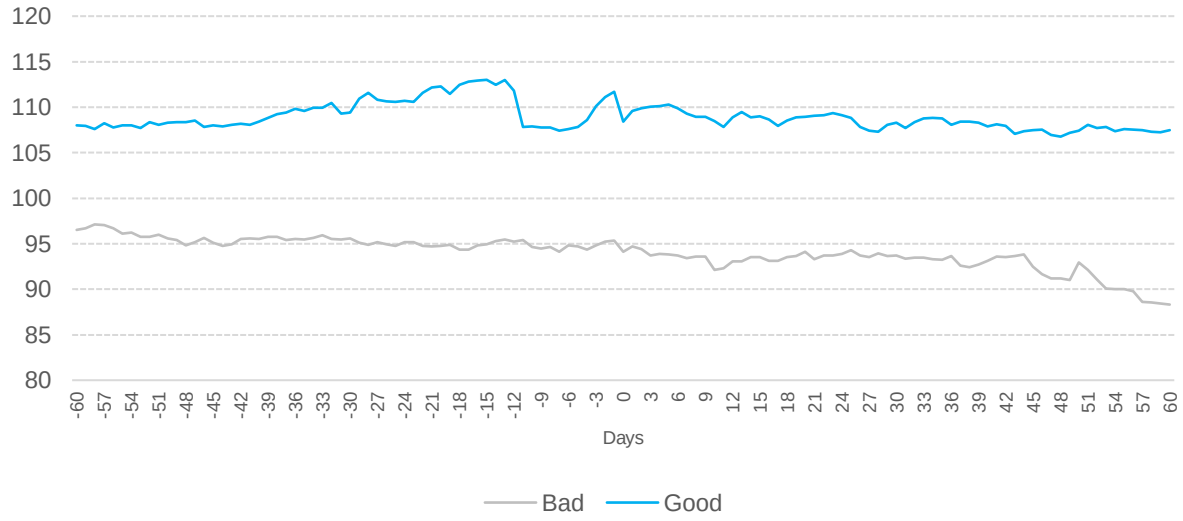


Figure 5: Average price 60 days before and after the voting date. Rebased at 3 days before the announcement date and divided into the two sub-samples



4.3 Returns analysis

The total sample of listed SPACs in the Italian market amounts to 25 companies, of which 10 classified as *Good SPACs*, 8 as *Bad SPACs.* 7 SPACs are excluded from the categorisation as they were liquidated after a negative vote on a proposed business combination or after failing to find a suitable target within the time foreseen by their bylaws. *Table 2* below reports the summary of my analysis in terms of returns for *Good* and *Bad SPACs.* Four methods are used: i) cumulative raw returns; ii) cumulative abnormal returns with industry Beta with Italian Small

Cap as market index; iii) cumulative abnormal returns with industry Beta with a broad market index, iv) cumulative abnormal returns with Beta equal to one.

Table 2: Post-Acquisition Returns (standard error in parenthesis)

Panel A. Cumulative Returns

	Good SPACs				Bad SPACs				Difference between Good and Bad SPACs			
Days after acquisition	**N**	**Average**			**N**	**Average**			**Average**			
7	10	12,3%	(0,0351)	***	8	-7,34%	(0,0290)	**	19,61%	(0,0455)	***
14	10	10,4%	(0,0333)	**	8	-9,04%	(0,0263)	**	19,48%	(0,0424)	***
28	10	10,9%	(0,0416)	**	8	-7,07%	(0,0244)	**	17,99%	(0,0483)	***
84	10	9,4%	(0,0503)	*	8	-12,78%	(0,0554)	*	22,21%	(0,0748)	***
182	10	11,2%	(0,0462)	**	8	-19,44%	(0,0652)	**	30,60%	(0,0799)	***
364	10	6,4%	(0,0482)		7	-22,36%	(0,0991)	*	28,77%	(0,1102)	**
728	7	18,5%	(0,1323)		5	-39,96%	(0,1127)	**	58,46%	(0,1738)	**

Panel B. Cumulative Abnormal Returns (Industry beta) - Small Cap Index

	Good SPACs				Bad SPACs				Difference between Good and Bad SPACs			
Days after acquisition	**N**	**Average**			**N**	**Average**			**Average**			
7	10	0,35%	(0,0281)		8	-0,88%	(0,0146)		1,23%	(0,0317)	
14	10	2,09%	(0,0380)		8	-2,47%	(0,0202)		4,56%	(0,0430)	
28	10	-0,09%	(0,0386)		8	-1,32%	(0,0394)		1,23%	(0,0552)	
84	10	0,21%	(0,0379)		8	-5,42%	(0,0333)		5,63%	(0,0505)	
182	10	-1,93%	(0,0484)		8	-8,36%	(0,0770)		6,43%	(0,0910)	
364	10	0,42%	(0,0538)		7	-17,22%	(0,1055)		17,65%	(0,1185)	
728	7	1,75%	(0,0803)		5	-33,56%	(0,0727)	***	35,31%	(0,1084)	**

Panel C. Cumulative Abnormal Returns (Industry beta) - Broad Market Index

	Good SPACs				Bad SPACs				Difference between Good and Bad SPACs			
Days after acquisition	**N**	**Average**			**N**	**Average**			**Average**			
7	10	-0,71%	(0,0299)		8	-0,51%	(0,0194)		-0,19%	(0,036)	
14	10	0,69%	(0,0405)		8	-1,97%	(0,0231)		2,66%	(0,047)	
28	10	-0,89%	(0,0392)		8	-1,20%	(0,0396)		0,30%	(0,056)	
84	10	-1,70%	(0,0378)		8	-9,12%	(0,0523)		7,42%	(0,065)	
182	10	-5,95%	(0,0352)		8	-15,18%	(0,0731)	*	9,23%	(0,081)	
364	10	-11,44%	(0,0378)	**	7	-23,69%	(0,1236)		12,26%	(0,129)	
728	7	-18,75%	(0,1126)		5	-61,53%	(0,0906)	***	42,77%	(0,145)	**

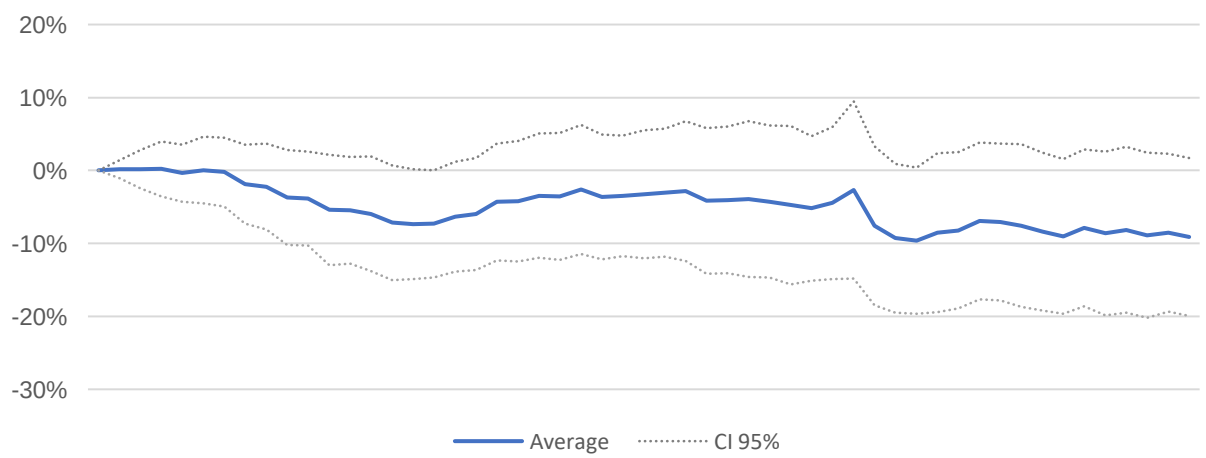
Panel D. Cumulative Abnormal Returns (Beta=1) - Small Cap Index										
	Good SPACs			**Bad SPACs**				**Difference between Good and Bad SPACs**		
Days after acquisition	**N**	**Average**		**N**	**Average**			**Average**		
7	10	0,22%	(0,0281)	8	-0,77%	(0,0147)		0,99%	(0,032)	
14	10	2,26%	(0,0377)	8	-2,43%	(0,0192)		4,69%	(0,042)	
28	10	0,07%	(0,0384)	8	-1,28%	(0,0381)		1,35%	(0,054)	
84	10	-0,33%	(0,0370)	8	-5,48%	(0,0376)		5,14%	(0,053)	
182	10	-2,04%	(0,0431)	8	-9,50%	(0,0745)		7,46%	(0,086)	
364	10	-0,69%	(0,0545)	7	-18,29%	(0,1024)		17,60%	(0,116)	
728	7	1,82%	(0,0786)	5	-36,18%	(0,0769)	***	38,00%	(0,110)	**
***Significant at the 0.01 level.										
**Significant at the 0.05 level.										
*Significant at the 0.10 level.										

4.3.1 Raw returns

In the chart in *Figure 6* below, the performance of all SPACs that completed an acquisition (18) is reported for 52 weeks following the voting date. Returns are computed weekly and are equally weighted. Returns are not adjusted for market movements.

On average returns are close to 0 for the first 6 weeks after the acquisition, then they further decrease reaching -9.10%, 52 weeks after the voting date. Compared to the findings of Jenkinson and Sousa focused on the US market, returns are still negative, but not as low as the US counterparties.

Figure 6: Raw Returns After Acquisition: All SPACs that Completed an Acquisition



In *Panel A* of *Table* 2 raw returns at 7, 14, 28, 84, 182, 364 and 728 calendar days after the acquisition are reported.

The performance within the two samples is quite heterogeneous, but it is evident that the *Good SPACs* sub-sample shows on average positive raw returns from the voting day. These returns show little variability for a year after the voting date, as a sign that the market was adequately pricing the target companies. After one year from the voting date on average *Good SPACs* have a return of 6.4%, with a minimum of -12.7% and a maximum of 40%. Returns are statistically significant for all, but the last two periods considered (1 year and 2 years).

On the other hand, the *Bad SPACs* sub-sample has disastrous returns that, on average, continue to worsen as time passes, with an average of -22.4%, a minimum of -66.8% and a maximum of 6.4% after one year. Returns are statistically different from zero for all periods considered.

The difference between the returns of the two sub-samples yields a positive return, ranging from a minimum of 17.99% after 28 days, to a maximum 58.46% after 2 years from the acquisition. The differences in returns are statistically significant for all periods considered.

4.3.2 Cumulative abnormal returns

Analysing risk-adjusted returns with a standard CAPM model using each individual stock's beta, calculated using weekly data from the date of acquisition to 30.10.2020, is of little help in this case. I obtain very different and often unrealistic betas for single stocks – some of which are not statistically significant – and with very low R^2 adjusted values. These results might indicate that using a standard CAPM model to estimate beta for single stocks, often illiquid, with short time series is not a feasible solution.

To overcome the limits of the Beta estimation, outline above, I use as proxy for each SPAC the industry Beta, obtained from Damodaran website. I select FTSE Italia Small Cap as market index. Using this methodology, with results presented in *Table 2 Panel B*, the abnormal returns

for *Good SPACs* are very close to 0% for all periods considered and are not statistically significant. *Bad SPACs* show negative abnormal returns, but statistically significant just after 728 days from the acquisition, with a return of -33.56%. The difference between *Good* and *Bad SPACs* is positive, but less striking than the one obtained considering solely raw returns. The difference is statistically significant at 728 days after acquisition, with a difference between the return of *Good SPACs* and *Bad SPACS* of 35.31%.

In *Panel C,* the methodology applied is the same as the one used in *Panel B.* The only change lies in the selection of the market index, I use a broader one – S&P 500 – to better match the source of the industry betas considered. The abnormal returns worsen considerably for both sub-samples. The *Good SPACs* sample after 6 months yields -5.95%, after 1 year (only period statistically significative) yields -11.44% and after 2 years -18.75%. The *Bad SPACs* sub-sample shows staggering results, reaching -15.18% after 6 months, -23.69% after 1 year and -61.53% after two year. Results are statistically significant after 6 months and 2 years, while they are not for the other periods. The difference between the two reaches 42.77% after 2 years and it is the only period for which results are statistically significant.

The results of *Panel D* are very similar to the ones in *Panel B,* where I use a Beta equal to one, to adjust for the market performance, instead of the industry Beta. The only statistically significant difference between *Good* and *Bad SPACs* is, again, at 728 days after the acquisition, with a difference in returns of 38%.

4.3.3 Why are Bad SPACs not liquidated?

According to the findings I presented in the previous paragraphs, some acquisitions were carried out notwithstanding that the market was signalling, before the voting date, that those mergers were value-destroying.

I try to explain this puzzling result by analysing the trading volumes around the vote day in the two sub-samples, as Jenkinson and Sousa found evidence for increased purchases – likely by the founders – of shares for the *Bad SPACs,* in an attempt of increasing the votes in favour of the acquisition. I found no evidence of this behaviour – although the volumes traded are very small – but rather the opposite; the *Good SPACs* volumes showed more activity in the 60 days after the announcement and in the 60 days before the voting date, as reported in the charts below.

Figure 7: Daily volumes / total outstanding shares 60 days after and before announcement date

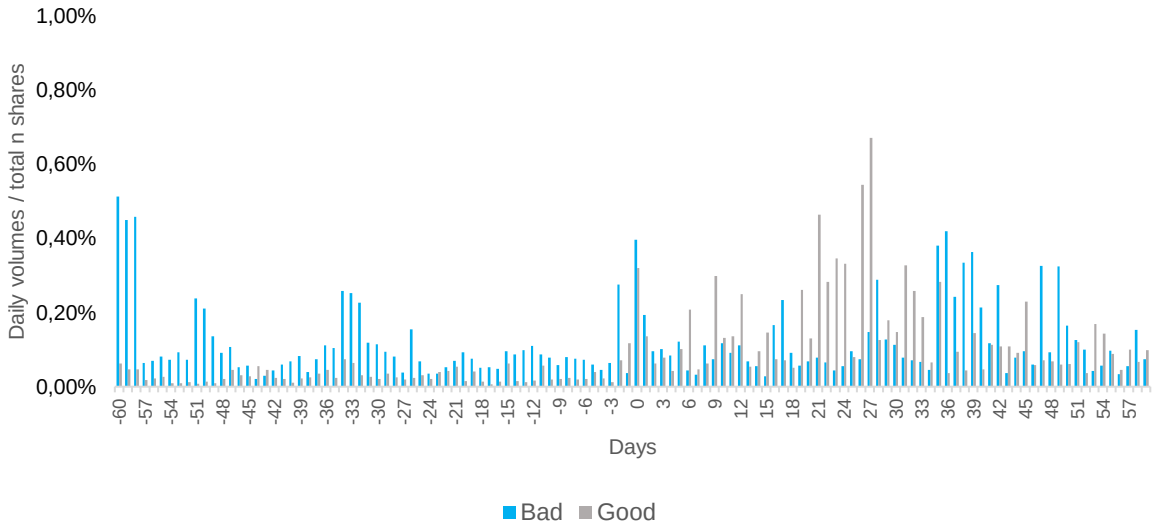
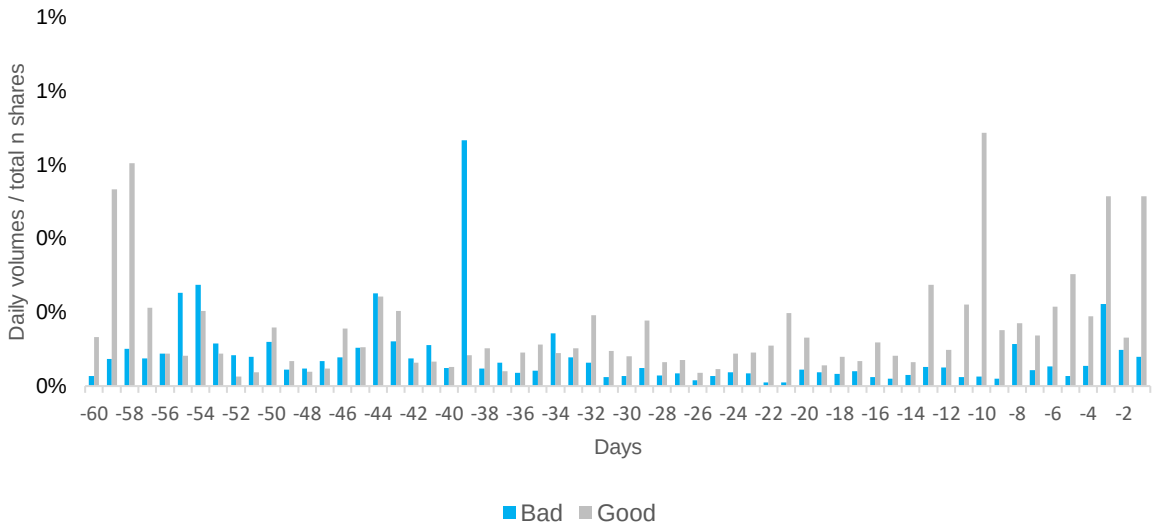


Figure 8: Daily volumes / total outstanding shares 60 days before voting date



In addition to the approach of Jenkinson and Sousa, I analysed the evolution of the cumulative volumes since listing in the two sub-samples in the same time horizon as the previous analysis. I find some evidence of more shares as a percentage of the outstanding ones being traded since the inception in the *Bad SPACs* sample, that could indicate that the parties gaining substantially from the acquisition to be completed – namely founders, target shareholders and in some cases underwriters – might have built up a substantial stake in order to influence the voting outcome. The charts are reported below:

Figure 9: Cumulated volumes / total outstanding shares - 60 days after and before announcement date

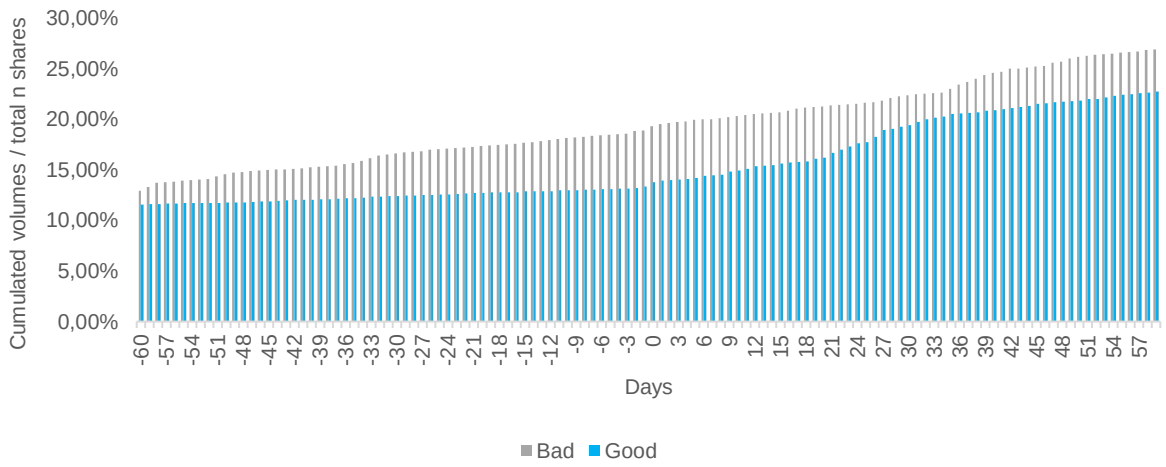
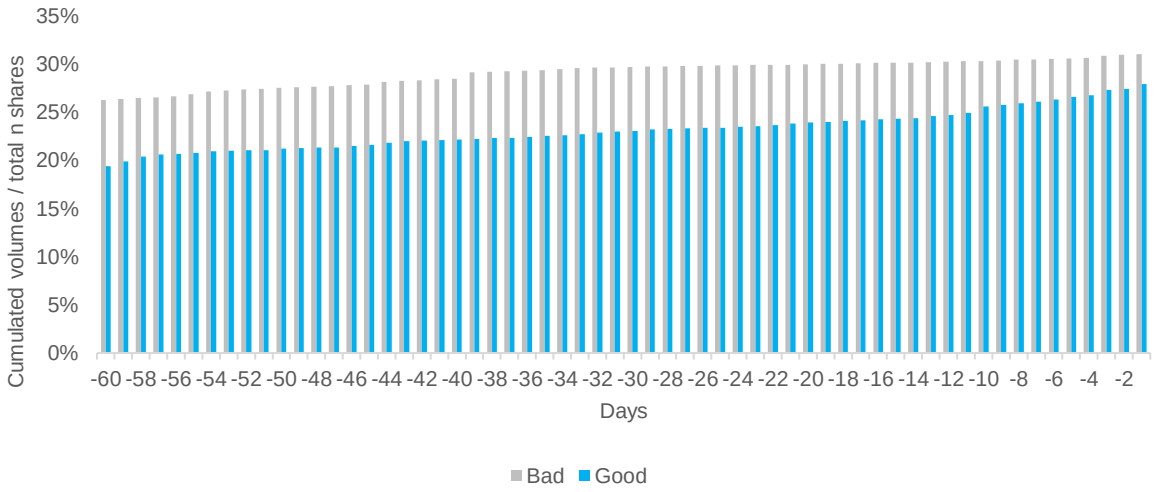


Figure 10: Cumulated volumes / total outstanding shares - 60 days before voting date



These results are solely based on public data available, and without knowing more information on the shareholders' structure and how the different groups casted their votes at the general assembly is difficult to draw conclusions on that.

5. Conclusion and limitations

A small number of caveats apply to my study: i) The sample analysed is small and often with short time series; ii) SPAC classification is not a standardised categorisation and a sizeable amount of manual search is needed, making the study of this market not easily scalable; iii) After the merger of the SPAC with the target, stocks are listed in the market with a new ticker and often the investor relations information is no longer available; iv) Regulatory filings potentially useful in understanding the trades and behaviour of insider have not been analysed; v) Market data on warrants and on single trades around the date of announcement are limited in time.

Overall, this asset class is appealing to several stakeholders, sponsors can leverage on their industry expertise, targets are listed without the drawbacks of traditional IPOs, targets' existing shareholders are able to quickly cash in their stake and investors are able to access investments opportunities with limited downside. These reasons potentially explain why SPACs are still alive and thriving.

In a world of abundant liquidity with desperate search for yield SPACs, if carefully selected, might provide a good source of returns. In an economy, such as the Italian one, with funding mostly bank-based and with a lower number of companies listed on the stock exchange compared to European peers, SPACs might be a good instrument for achieving good returns, increasing market discipline, and benefiting the economy as a whole.

Regarding future prosperity as an asset class, I believe this will depend on finding an equilibrium in terms of an institutional framework for the instrument where the incentives for

the stakeholders involved are adequately calibrated and thereby the likelihood of opportunistic behaviour is reduced.

Overall time will tell the success of this product, but more research and scrutiny are needed to increase awareness of investors' choices.

6. References

Blomkvist, Magnus, and Milos Vulanovic. 2020. "SPAC IPO Waves". *SSRN Electronic Journal*. doi:10.2139/ssrn.3686498.

Chemmanur, Thomas J., and Paolo Fulghieri. 1997. "Why Include Warrants In New Equity Issues? A Theory Of Unit Ipos". *The Journal Of Financial And Quantitative Analysis* 32 (1): 1. doi:10.2307/2331314.

Cumming, Douglas J., Lars Helge Hass, and Denis Schweizer. 2012. "The Fast Track IPO – Success Factors For Taking Firms Public With Spacs". *SSRN Electronic Journal*. doi:10.2139/ssrn.2144892.

Dimitrova, Lora. 2012. "The Perverse Incentives Of Spacs". *SSRN Electronic Journal*. doi:10.2139/ssrn.2139392.

Hale, Lola Miranda. 2006. "SPAC: A Financing Tool With Something For Everyone". *Journal Of Corporate Accounting & Finance* 18 (2): 67-74. doi:10.1002/jcaf.20278.

Ignatyeva, Elena, Christian Rauch, and Mark Wahrenburg. 2012. "Analyzing European Spacs". *SSRN Electronic Journal*. doi:10.2139/ssrn.2145277.

Jenkinson, Tim, and Miguel Sousa. 2009. "Why SPAC Investors Should Listen To The Market". *SSRN Electronic Journal*. doi:10.2139/ssrn.1341771.

Kolb, Johannes, and Tereza Tykvová. 2016. "Going Public Via Special Purpose Acquisition Companies: Frogs Do Not Turn Into Princes". *Journal Of Corporate Finance* 40: 80-96. doi:10.1016/j.jcorpfin.2016.07.006.

Lakicevic, Milan, Yochanan Shachmurove, and Milos Vulanovic. 2014. "Institutional Changes Of Specified Purpose Acquisition Companies (Spacs)". *The North American Journal Of Economics And Finance* 28: 149-169. doi:10.1016/j.najef.2014.03.002.

Lewellen, Stefan M. 2009. "Spacs As An Asset Class". *SSRN Electronic Journal*. doi:10.2139/ssrn.1284999.

Murray, James S. 2011. "The Regulation And Pricing Of Special Purpose Acquisition Corporation Ipos". *SSRN Electronic Journal*. doi:10.2139/ssrn.1746530.

Rodrigues, Usha, and Mike Stegemoller. 2014. "What All-Cash Companies Tell Us About Ipos And Acquisitions". *Journal Of Corporate Finance* 29: 111-121. doi:10.1016/j.jcorpfin.2014.07.003.

7. Appendix

All SPACs

Industry	Beta	Ticker	Alternative Ticker	IPO Size €m	Listing date	Announcement combination date	Date voting on combination	Price @ announcement + 1	Price @ vote - 1	Price @ vote	Cumulative Returns after t days							
											7	14	28	84	182	364	728	1092
Banks (Regional)	0,4969	SPAX IM Equity	ILTY IM Equity	600	12/01/2018	13/04/2018	05/03/2019	9,61	7,29	7,30	-24,6%	-21,7%	-11,9%	-17,3%	-19,0%	-7,7%	NA	NA
Packaging & Container	1,1125	GCL IM Equity		500	27/11/2017	16/04/2018	06/08/2018	10,00	9,84	9,72	-3,0%	-3,2%	-6,0%	-23,0%	-40,2%	-38,2%	-35,9%	NA
NA	NA	IDM IM Equity		250	22/11/2017	29/10/2018	NA	9,72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aerospace/Defense	1,3043	AVIO IM Equity		250	15/07/2015	20/10/2016	10/04/2017	10,20	13,32	13,40	32,3%	31,0%	36,5%	31,1%	37,5%	40,0%	24,8%	21,2%
Apparel	1,0385	FILA IM Equity		130	03/12/2013	15/01/2015	01/06/2015	9,56	11,87	9,38	-2,9%	-5,4%	-4,9%	-10,5%	3,4%	21,3%	75,9%	67,1%
Machinery	1,3113	IN3 IM Equity	SCF IM Equity	150	28/09/2017	15/04/2019	08/11/2019	9,85	9,90	9,65	-6,7%	-5,0%	3,9%	12,0%	6,5%	NA	NA	NA
NA	NA	1819370D IM Equity		150	14/07/2017	19/01/2018	NA	10,30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	LCC IM Equity		140	12/02/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical (Specialty)	1,2151	SICT IM Equity		150	05/07/2017	11/01/2019	04/06/2019	13,61	10,14	10,15	4,5%	1,7%	0,8%	-11,0%	1,0%	1,0%	NA	NA
Electrical Equipment	1,3364	CELL IM Equity		130	24/02/2017	18/01/2018	04/06/2018	10,50	9,45	9,40	-6,5%	-8,0%	-12,0%	-16,0%	-15,0%	-30,0%	-50,2%	NA
NA	NA	VALU IM Equity		110	04/04/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	VEI1 IM Equity		100	31/01/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Software (System & Application)	1,1485	ALPI IM Equity	AV IM Equity	100	19/01/2018	19/12/2018	18/04/2019	9,80	10,80	11,99	25,2%	17,5%	14,0%	6,8%	-1,0%	-2,4%	NA	NA
Drugs (Pharmaceutical)	1,1493	FF IM Equity		100	26/09/2016	07/06/2018	10/07/2018	9,80	10,20	10,30	4,0%	3,0%	4,0%	-2,0%	-4,5%	1,0%	6,0%	NA
Machinery	1,3113	CFT IM Equity		98	28/06/2017	27/02/2018	30/07/2018	10,30	9,68	9,24	-13,2%	-18,0%	-17,8%	-34,2%	-45,2%	-66,8%	-77,7%	NA
NA	NA	SPTV IM Equity		90	13/09/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Food Wholesalers	0,7786	ORS IM Equity		80	16/06/2015	28/10/2016	13/02/2017	9,86	11,09	10,59	5,5%	6,5%	2,6%	30,6%	29,1%	-12,7%	-25,1%	-32,0%
NA	NA	CFP IM Equity		65	11/07/2017	19/06/2018	NA	9,70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Software (System & Application)	1,1485	SES IM Equity		50	20/06/2011	15/10/2012	01/02/2013	10,00	10,80	10,75	6,5%	5,5%	2,4%	4,5%	5,5%	13,8%	32,8%	44,2%
Machinery	1,3113	ISI IM Equity	LUVE IM Equity	50	18/06/2013	26/01/2015	09/07/2015	9,90	11,79	11,21	10,8%	9,7%	10,0%	1,2%	0,0%	-6,5%	35,1%	0,0%
Electronics (General)	1,2907	IN2 IM Equity	SIT IM Equity	51	03/05/2016	25/02/2017	20/07/2017	9,81	13,30	10,92	14,9%	15,9%	14,4%	19,4%	17,0%	7,0%	-20,0%	-53,1%
Insurance (General)	0,9065	ARCH IM Equity	NET IM Equity	47	16/04/2018	20/11/2018	17/12/2018	9,45	9,60	9,59	-3,0%	-10,5%	-6,7%	1,2%	-20,7%	5,7%	NA	NA
Heathcare Information and Technology	1,1224	1726931D IM Equity	GPI IM Equity	51	27/07/2015	05/09/2016	19/10/2016	9,98	9,96	9,96	2,0%	0,0%	-0,1%	0,0%	4,0%	6,4%	-14,2%	-25,0%
Green & Renewable Energy	0,9223	ESCO IM Equity		35	18/12/2013	25/06/2015	22/12/2015	9,77	9,60	9,50	-3,7%	-5,9%	-6,0%	-25,0%	-25,9%	-26,0%	-21,8%	NA
Machinery	1,3113	GEA IM Equity	COM IM Equity	30	22/01/2019	NA	13/03/2019	NA	10,40	11,70	21,9%	19,0%	29,4%	24,2%	23,6%	1,6%	NA	NA
			Average	140				100,9%	105,0%	102,6%	0,4%	0,2%	0,3%	0,0%	-0,2%	-0,5%	-0,6%	0,3%
			Max	600				136,1%	133,2%	134,0%	3,2%	3,1%	3,7%	3,1%	3,8%	4,0%	7,6%	6,7%
			Min	30				94,5%	72,9%	73,0%	-2,5%	-2,2%	-1,8%	-3,4%	-4,5%	-6,7%	-7,8%	-5,3%
			Median	100				98,5%	101,7%	100,6%	0,3%	0,1%	0,2%	0,1%	0,1%	0,1%	-1,7%	0,0%

All SPACs with business combination

Industry	Beta	Ticker	Alternative Ticker	IPO Size €m	Listing date	Announcement combination date	Date voting on combination	Price @ announcement + 1	Price @ vote - 1	Price @ vote	Cumulative Returns after t days							
											7	14	28	84	182	364	728	1092
Banks (Regional)	0,4969	SPAX IM Equity	ILTY IM Equity	600	12/01/2018	13/04/2018	05/03/2019	9,61	7,29	7,30	-24,6%	-21,7%	-11,9%	-17,3%	-19,0%	-7,7%	NA	NA
Packaging & Container	1,1125	GCL IM Equity		500	27/11/2017	16/04/2018	06/08/2018	10,00	9,84	9,72	-3,0%	-3,2%	-6,0%	-23,0%	-40,2%	-38,2%	-35,9%	NA
Aerospace/Defense	1,3043	AVIO IM Equity		250	15/07/2015	20/10/2016	10/04/2017	10,20	13,32	13,40	32,3%	31,0%	36,5%	31,1%	37,5%	40,0%	24,8%	21,2%
Apparel	1,0385	FILA IM Equity		130	03/12/2013	15/01/2015	01/06/2015	9,56	11,87	9,38	-2,9%	-5,4%	-4,9%	-10,5%	3,4%	21,3%	75,9%	67,1%
Machinery	1,3113	IN3 IM Equity	SCF IM Equity	150	28/09/2017	15/04/2019	08/11/2019	9,85	9,90	9,65	-6,7%	-5,0%	3,9%	12,0%	6,5%	NA	NA	NA
Chemical (Specialty)	1,2151	SICT IM Equity		150	05/07/2017	11/01/2019	04/06/2019	13,61	10,14	10,15	4,5%	1,7%	0,8%	-11,0%	1,0%	1,0%	NA	NA
Electrical Equipment	1,3364	CELL IM Equity		130	24/02/2017	18/01/2018	04/06/2018	10,50	9,45	9,40	-6,5%	-8,0%	-12,0%	-16,0%	-15,0%	-30,0%	-50,2%	NA
Software (System & Application)	1,1485	ALPI IM Equity	AV IM Equity	100	19/01/2018	19/12/2018	18/04/2019	9,80	10,80	11,99	25,2%	17,5%	14,0%	6,8%	-1,0%	-2,4%	NA	NA
Drugs (Pharmaceutical)	1,1493	FF IM Equity		100	26/09/2016	07/06/2018	10/07/2018	9,80	10,20	10,30	4,0%	3,0%	4,0%	-2,0%	-4,5%	1,0%	6,0%	NA
Machinery	1,3113	CFT IM Equity		98	28/06/2017	27/02/2018	30/07/2018	10,30	9,68	9,24	-13,2%	-18,0%	-17,8%	-34,2%	-45,2%	-66,8%	-77,7%	NA
Food Wholesalers	0,7786	ORS IM Equity		80	16/06/2015	28/10/2016	13/02/2017	9,86	11,09	10,59	5,5%	6,5%	2,6%	30,6%	29,1%	-12,7%	-25,1%	-32,0%
Software (System & Application)	1,1485	SES IM Equity		50	20/06/2011	15/10/2012	01/02/2013	10,00	10,80	10,75	6,5%	5,5%	2,4%	4,5%	5,5%	13,8%	32,8%	44,2%
Machinery	1,3113	ISI IM Equity	LUVE IM Equity	50	18/06/2013	26/01/2015	09/07/2015	9,90	11,79	11,21	10,8%	9,7%	10,0%	1,2%	0,0%	-6,5%	35,1%	0,0%
Electronics (General)	1,2907	IN2 IM Equity	SIT IM Equity	51	03/05/2016	25/02/2017	20/07/2017	9,81	13,30	10,92	14,9%	15,9%	14,4%	19,4%	17,0%	7,0%	-20,0%	-53,1%
Insurance (General)	0,9065	ARCH IM Equity	NET IM Equity	47	16/04/2018	20/11/2018	17/12/2018	9,45	9,60	9,59	-3,0%	-10,5%	-6,7%	1,2%	-20,7%	5,7%	NA	NA
Heathcare Information and Technology	1,1224	1726931D IM Equity	GPI IM Equity	51	27/07/2015	05/09/2016	19/10/2016	9,98	9,96	9,96	2,0%	0,0%	-0,1%	0,0%	4,0%	6,4%	-14,2%	-25,0%
Green & Renewable Energy	0,9223	ESCO IM Equity		35	18/12/2013	25/06/2015	22/12/2015	9,77	9,60	9,50	-3,7%	-5,9%	-6,0%	-25,0%	-25,9%	-26,0%	-21,8%	NA
Machinery	1,3113	GEA IM Equity	COM IM Equity	30	22/01/2019	NA	13/03/2019	NA	10,40	11,70	21,9%	19,0%	29,4%	24,2%	23,6%	1,6%	NA	NA
			Average	145				101,2%	105,0%	102,6%	3,6%	1,8%	2,9%	-0,4%	-2,4%	-5,4%	-5,9%	3,2%
			Max	600				136,1%	133,2%	134,0%	32,3%	31,0%	36,5%	31,1%	37,5%	40,0%	75,9%	67,1%
			Min	30				94,5%	72,9%	73,0%	-24,6%	-21,7%	-17,8%	-34,2%	-45,2%	-66,8%	-77,7%	-53,1%
			Median	99				98,6%	101,7%	100,6%	3,0%	0,8%	1,6%	0,6%	0,5%	1,0%	-17,1%	0,0%

Good SPACs

Industry	Beta	Ticker	Alternative Ticker	IPO Size €m	Listing date	Announcement combination date	Date voting on combination	Price @ announcement + 1	Price @ vote - 1	Price @ vote	Cumulative Returns after t days							
											7	14	28	84	182	364	728	1092
Aerospace/Defense	1,3043	AVIO IM Equity		250	15/07/2015	20/10/2016	10/04/2017	10,20	13,32	13,40	32,3%	31,0%	36,5%	31,1%	37,5%	40,0%	24,8%	21,2%
Apparel	1,0385	FILA IM Equity		130	03/12/2013	15/01/2015	01/06/2015	9,56	11,87	9,38	-2,9%	-5,4%	-4,9%	-10,5%	3,4%	21,3%	75,9%	67,1%
Chemical (Specialty)	1,2151	SICT IM Equity		150	05/07/2017	11/01/2019	04/06/2019	13,61	10,14	10,15	4,5%	1,7%	0,8%	-11,0%	1,0%	1,0%	NA	NA
Software (System & Application)	1,1485	ALPI IM Equity	AV IM Equity	100	19/01/2018	19/12/2018	18/04/2019	9,80	10,80	11,99	25,2%	17,5%	14,0%	6,8%	-1,0%	-2,4%	NA	NA
Drugs (Pharmaceutical)	1,1493	FF IM Equity		100	26/09/2016	07/06/2018	10/07/2018	9,80	10,20	10,30	4,0%	3,0%	4,0%	-2,0%	-4,5%	1,0%	6,0%	NA
Food Wholesalers	0,7786	ORS IM Equity		80	16/06/2015	28/10/2016	13/02/2017	9,86	11,09	10,59	5,5%	6,5%	2,6%	30,6%	29,1%	-12,7%	-25,1%	-32,0%
Software (System & Application)	1,1485	SES IM Equity		50	20/06/2011	15/10/2012	01/02/2013	10,00	10,80	10,75	6,5%	5,5%	2,4%	4,5%	5,5%	13,8%	32,8%	44,2%
Machinery	1,3113	ISI IM Equity	LUVE IM Equity	50	18/06/2013	26/01/2015	09/07/2015	9,90	11,79	11,21	10,8%	9,7%	10,0%	1,2%	0,0%	-6,5%	35,1%	0,0%
Electronics (General)	1,2907	IN2 IM Equity	SIT IM Equity	51	03/05/2016	25/02/2017	20/07/2017	9,81	13,3	10,92	14,9%	15,9%	14,4%	19,4%	17,0%	7,0%	-20,0%	-53,1%
Machinery	1,3113	GEA IM Equity	COM IM Equity	30	22/01/2019	NA	13/03/2019	NA	10,40	11,70	21,9%	19,0%	29,4%	24,2%	23,6%	1,6%	NA	NA
			Average	99				102,8%	113,7%	110,4%	12,3%	10,4%	10,9%	9,4%	11,2%	6,4%	18,5%	7,9%
			Max	250				136,1%	133,2%	134,0%	32,3%	31,0%	36,5%	31,1%	37,5%	40,0%	75,9%	67,1%
			Min	30				95,6%	101,4%	93,8%	-2,9%	-5,4%	-4,9%	-11,0%	-4,5%	-12,7%	-25,1%	-53,1%
			Median	90				98,6%	109,4%	108,4%	8,7%	8,1%	7,0%	5,7%	4,4%	1,3%	24,8%	10,6%

Bad SPACs

Industry	Beta	Ticker	Alternative Ticker	IPO Size €m	Listing date	Announcement combination date	Date voting on combination	Price @ announcement + 1	Price @ vote - 1	Price @ vote	Cumulative Returns after t days							
											7	14	28	84	182	364	728	1092
Banks (Regional)	0,4969	SPAX IM Equity	ILTY IM Equity	600	12/01/2018	13/04/2018	05/03/2019	9,61	7,29	7,30	-24,6%	-21,7%	-11,9%	-17,3%	-19,0%	-7,7%	NA	NA
Packaging & Container	1,1125	GCL IM Equity		500	27/11/2017	16/04/2018	06/08/2018	10,00	9,84	9,72	-3,0%	-3,2%	-6,0%	-23,0%	-40,2%	-38,2%	-35,9%	NA
Machinery	1,3113	IN3 IM Equity	SCF IM Equity	150	28/09/2017	15/04/2019	08/11/2019	9,85	9,90	9,65	-6,7%	-5,0%	3,9%	12,0%	6,5%	NA	NA	NA
Electrical Equipment	1,3364	CELL IM Equity		130	24/02/2017	18/01/2018	04/06/2018	10,50	9,45	9,40	-6,5%	-8,0%	-12,0%	-16,0%	-15,0%	-30,0%	-50,2%	NA
Machinery	1,3113	CFT IM Equity		98	28/06/2017	27/02/2018	30/07/2018	10,30	9,68	9,24	-13,2%	-18,0%	-17,8%	-34,2%	-45,2%	-66,8%	-77,7%	NA
Insurance (General)	0,9065	ARCH IM Equity	NET IM Equity	47	16/04/2018	20/11/2018	17/12/2018	9,45	9,60	9,59	-3,0%	-10,5%	-6,7%	1,2%	-20,7%	5,7%	NA	NA
Heathcare Information and Technology	1,1224	1726931D IM Equity	GPI IM Equity	51	27/07/2015	05/09/2016	19/10/2016	9,98	9,96	9,96	2,0%	0,0%	-0,1%	0,0%	4,0%	6,4%	-14,2%	-25,0%
Green & Renewable Energy	0,9223	ESCO IM Equity		35	18/12/2013	25/06/2015	22/12/2015	9,77	9,60	9,50	-3,7%	-5,9%	-6,0%	-25,0%	-25,9%	-26,0%	-21,8%	NA
			Average	201				99,3%	94,2%	92,9%	-7,3%	-9,0%	-7,1%	-12,8%	-19,4%	-22,4%	-40,0%	-25,0%
			Max	600				105,0%	99,6%	99,6%	2,0%	0,0%	3,9%	12,0%	6,5%	6,4%	-14,2%	-25,0%
			Min	35				94,5%	72,9%	73,0%	-24,6%	-21,7%	-17,8%	-34,2%	-45,2%	-66,8%	-77,7%	-25,0%
			Median	114				99,2%	96,4%	95,5%	-5,1%	-6,9%	-6,3%	-16,7%	-19,9%	-26,0%	-35,9%	-25,0%